



LABORATORY
OF THE
INLAND REVENUE DEPARTMENT
OTTAWA, CANADA

BULLETIN No. 257

MILK POWDERS AND CONDENSED MILK.

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OTTAWA, March 31, 1913.

WM. HIMSWORTH, Esq.,
Acting Deputy Minister,
Inland Revenue.

SIR,—I beg to submit herewith a report dealing with thirty (30) samples sold as condensed milks—of which number seven (7) are condensed without sugar, and should be offered as evaporated milk (see G. 934); and fifteen (15) samples of milk powders.

Condensed milk is required by Order in Council of November 3, 1910, to meet the following requirements:—

‘Condensed milk is milk from which a considerable portion of water has been evaporated, and to which sugar has been added. It contains not less than 28 per cent of milk solids, and not less than 7.7 per cent of milk fat.’

No. 49150 contains only traces of fat; and is made from skimmed milk.

No. 38335 contains only 3.85 per cent of fat, and is made from milk which has been partly skimmed.

The labels of these samples claim that they are genuine whole milk products. Hence they must be regarded as adulterated under the Act.

In three samples (Nos. 49146-7-8) the fat is slightly below standard. The deficiencies, however, are not great, and may not exceed such natural variations as season and locality introduce. In eight (8) samples the fat varies from 5.80 to 7.12 per cent. These must be regarded as adulterated under the Act, although they represent brands which generally give a good account of themselves. It is to be noted that, even within the limits of the present collection, the average results for such of these brands as are represented by several samples is creditable.

Thus, Borden's Condensed Milk is represented by the following:—

Sample No. 49641..	Fat: 8.08 per cent.
" 49642..	" 8.85 "
" 49656..	" 6.35 "
" 49657..	" 9.05 "
" 49668..	" 7.10 "
" 49669..	" 6.95 "
" 38331..	" 8.40 "
" 38332..	" 9.72 "
" 49145..	" 9.05 "
" 49147..	" 7.55 "

Mean of 10 samples—8.11 per cent.

The Reindeer Brand is represented by:—

Sample No. 49649..	Fat: 6.80 per cent..
" 49667..	" 7.87 "
" 38336..	" 7.12 "
" 49146..	" 7.42 "

Mean for 4 samples—7.30 per cent.

The St. Charles Condensed Milk shows as follows:—

Sample No. 49655..	Fat: 7.90 per cent.
" 49666..	" 8.00 "
" 38334..	" 7.05 "
" 49148..	" 7.38 "
" 49153..	" 7.82 "

Mean of 5 samples—7.63 per cent.

Summary of condensed milk samples:—

Meet requirements in full..	10 samples.
Meet requirements, nearly..	3 "
Below standard more than 0.5 per cent..	9 "
Adulterated as skimmed..	2 "
Total..	23 "

Evaporated milk is defined as follows:—

'Is milk from which a considerable portion of water has been evaporated, and contains not less than 26 per cent of milk solids, and not less than 7.20 per cent of milk fat.'

Out of seven (7) samples, only one fails to meet the required standard, viz.: No. 38333, which falls 0.70 too low in fat, and 2.23 too low in milk solids.

Two other samples (38338 and 49151) are technically adulterated as being labelled 'Cream.' The explanatory words 'An unsweetened condensed milk,' appear in small type upon the label, but are comparatively inconspicuous.

Our standards require cream to contain at least 18 per cent of milk fat; and condensed cream to contain at least 25 per cent of fat (G. 934).

Milk powder is defined by standards published in December, 1910, (see G. 934) as follows:—

The soluble powder product made from milk, and contains, unless otherwise specified, not less than ninety-five (95) per cent of milk solids, and not less than twenty-six (26) per cent of milk fat.

All samples obtained by our inspectors appear to be the products of one manufacturer, and to be sold under the names *Trumilk* and *Milk Stock*, the first being a

whole milk product; the second a skimmed milk. A single sample (No. 4416) sold as modified milk powder, represents an intermediate product, the result of drying a partly skimmed milk.

Ten samples sold as Trumilk and guaranteed as whole milk powders averages 26.76 per cent of fat; and vary among themselves as follows:—28.10, 27.61, 27.53, 27.48, 27.36, 27.23, 26.84, 26.61, 25.66, 23.22. With exception of the last two samples they meet the requirements of our standard; and the deficiency in the ninth sample is less than one-half of one per cent.

One sample only (No. 38326) falls more than one per cent below the standard, (deficiency: 2.78 per cent) and is evidently manufacture from a milk of inferior quality.

Milk stock (skimmed milk) appears to be of very uniform quality, and is true to the claims made for it.

The collection herein was made in April and May of last year, and should have been reported long ago.

Press of other work caused it to be delayed, in favour of work which could not so well be held over.

I beg to recommend publication of this report as Bulletin No. 257.

I have the honour to be, Sir,

Your obedient servant,

A. MCGILL,

Chief Analyst.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of opinion).
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF NELSON—

1912.								
April 18	Condensed Milk.	49641	Cooper & Christine, Vernon, B.C.	3 tins.	45	Borden Condensed Milk Co., Tillsonburg.		
" 18	"	49642	"	3 "	45	"		
" 18	"	49649	W. H. Smith, Vernon, B.C.	3 "	45	Reindeer, Ltd., Truro, N.S.		
" 18	"	49655	W. R. Megaw, Vernon, B.C.	3 "	40	St. Charles Condensing Co., Ingersoll.		
" 18	"	49656	"	3 "	40	Borden's Condensed Milk Co., Tillsonburg.		
" 18	"	49657	"	3 "	45	"		
May 2	"	49666	Hudsons Bay Co., Nelson, B.C.	3 "	40	St. Charles Condensing Co., Ingersoll.		
" 2	"	49667	"	3 "	45	Reindeer, Ltd., Truro, N.S.		
" 2	"	49668	Bell Trading Co., Nelson, B.C.	3 "	45	Borden's Condensed Milk Co., Tillsonburg.		
" 2	"	49669	"	3 "	45	"		

DISTRICT OF VANCOUVER—

May 1	Condensed Milk.	38331	Woodward Dept. Stores, Vancouver, B.C.	3 tins.	40	Borden & Co., New York.		"Gold Seal" Brand prepared from pure cream milk.
" 1	"	38332	Dom. Grocery, Vancouver, B.C.	3 "	45	"		"Eagle" Brand Condensed milk combined with best refined sugar.
" 1	"	38333	F. Filion, Vancouver, B.C.	3 "	15	St. Charles Milk Co., Ingersoll.		Prepared from pure rich milk only.
" 1	"	38334	W. Clark, Vancouver, B.C.	3 "	40	St. Charles Condensing Co., Ingersoll.		Prepared from finest milk and best granulated sugar.
" 1	"	38335	A. C. Barbig, Fairview, Vancouver.	3 "	45	J. Malcolm, Son, St. Georges, Ont.		Every can guaranteed until used.
" 6	"	38336	J. S. Hirst, Vancouver, B.C.	3 "	45	Reindeer Ltd., Truro, N.S.		Every can guaranteed.
" 6	"	38337	D. B. Irwin, Vancouver, B.C.	3 "	15	Dom. Cannery Ltd., Hamilton.		"Quaker" Brand.

CONDENSED MILK.

Results of Analysis.								No. of Sample.	Remarks and Opinion of the Chief Analyst.	
Density.	Water.	Total Solids.	Ash.	Fat.	Milk Sugar.	Loss to 500 cc warm wat. . .	Calculated on 9% basis.			
							Concentration.			Fat in original bulk.

THOS. PARKER, INSPECTOR.

	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
1-3181	25.45	74.55	1.80	8.05	.....	59.50	.....	.....	49641	Meets standard.
1-3129	26.10	73.90	1.66	8.85	.....	56.90	.....	.....	49642	"
1-3108	30.53	69.47	1.82	6.80	.....	56.00	.....	.....	49649	Fat too low.
				7.90	.....				49655	Meets standard in fat.
1-3123	27.50	72.50	1.75	6.35	.....	58.20	.....	.....	49656	Fat too low.
1-3009	26.80	73.20	1.61	9.05	.....	57.10	.....	.....	49657	Meets standard.
1-3080	26.90	73.10	1.87	8.00	.....	57.10	.....	.....	49666	"
1-3076	26.75	73.25	1.66	7.87	.....	58.92	.....	.....	49667	"
				7.10	.....				49668	Fat too low.
				6.95	.....				49669	"

J. F. POWER, INSPECTOR.

	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.		
1-3129	26.45	73.55	1.72	8.40	.....	58.50	.....	.....	38331	Meets standard.
1-2960	27.28	72.72	1.86	9.72	.....	55.62	.....	.....	38332	"
1-0687	76.33	23.77	1.50	6.50	9.93	.....	1.99	3.38	38333	Fat too low. Non-sugared.
1-2994	29.58	70.42	1.88	7.06	.....	56.45	.....	.....	38334	Fat too low.
1-3128	30.40	69.60	1.70	3.85	.....	58.70	.....	.....	38335	Partially skimmed milk adulterated.
1-3044	29.80	70.20	1.58	7.12	.....	56.40	.....	.....	38336	Fat too low.
1-0748	71.30	28.70	1.85	7.80	10.07	....	2.42	3.36	38337	Meets standard. Non-sugared

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher, as given by the Vendor.		Inspector's Report. (Is not an expression of opinion).
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF VANCOUVER—

1912.								
May 6	Condensed Milk.	38338	T. W. Turner, Vancouver, B.C.	3 tins.	45	Pacific Coast Condensing Co., Seattle, Wash.		We guarantee this can containing no substance but fresh pure sweet milk.
" 6	"	38339	Webber & Webber, Vancouver, B.C.	3 "	25	Canada First Mfg. Co.		Every can guaranteed.
" 6	"	38340	A. & C. Grocery, Vancouver, B.C.	3 "	30	B. C. Milk Products Co., New Westminster, B.C.		Complies with all requirements of Pure Food Laws.

DISTRICT OF VICTORIA—

April 23	Condensed Milk.	49145	Windser Grocery Co., Ltd., Victoria, B.C.	3 tins	45	Borden's Condensed Milk Co., New York		"Gold Seal".
" 23	"	49146	"	3 "	45	Reindeer, Ltd., Truro, N.S.		"Reindeer" ..
" 24	"	49147	The West End Grocery Co., Ltd., Victoria, B.C.	3 "	45	Borden's Condensed Milk Co., New York		"Eagle"
" 24	"	49148	"	3 "	35	St. Charles Condensing Co., Ingersoll.		"Purity"
" 24	"	49149	"	3 "	35	Aylmer Condensed Milk Co., Aylmer, Ont.		"Canada First".
" 24	"	49150	Harrison & McDonald, Victoria, B.C.	3 "	30		W. O. Wallace, Victoria, B.C.	"Coach"
" 25	"	49151	W. B. Hall, Victoria, B.C.	3 "	25	Pacific Coast Condensed Milk Co., Seattle, Wash.		"Carnation" ..
" 25	"	49152	D. H. Ross & Co., Victoria, B.C.	3 "	40	Truro Condensed Milk Co., Truro, N.S.		"Mayflower" ..
" 25	"	49153	Copas & Young, Victoria, B.C.	3 "	40	St. Charles Condensing Co., Ingersoll.		"Purity"
" 25	"	49154	E. G. Bailey, Victoria, B.C.	3 "	15	Borden's Condensed Milk Co., New York		"Peerless" ...

CONDENSED MILK.

Results of Analysis.								No. of Sample.	Remarks and Opinion of the Chief Analyst.	
Density.	Water.	Total Solids.	Ash.	Fat.	Milk Sugar.	Loss to 500 cc. warm water.	Calculated on 9% basis.			
							Concentration.			Fat in original bulk.

Concluded.

	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.		
1-0587	74.98	25.02	1.63	8.35	9.78	.....	1.95	4.50	38338	Adulterated, in being labelled Cream. Is a good evaporated milk.
1-0537	74.13	25.87	1.65	7.35	10.49	.....	2.11	3.57	38339	Meets standard. Non-sugared.
1-0704	70.57	29.43	1.39	7.80	9.01	....	2.40	3.24	38340	" "

D. O'SULLIVAN, INSPECTOR.

1-2992	27.15	72.85	1.96	9.05	.....	55.90	.....	.....	49145	Meets standard.
1-3049	29.03	70.97	1.75	7.42	.....	57.22	.....	.....	49146	Slightly below standard in fat
1-3158	26.93	73.07	1.52	7.55	.....	59.22	.....	.....	49147	pass. " "
1-3130	27.62	72.38	1.70	7.38	.....	58.92	.....	.....	49148	" " "
1-3081	28.30	71.70	1.61	5.80	.....	57.85	.....	.....	49149	Fat too low. Adulterated.
1-3644	30.00	70.00	1.73	traces	.....	63.15	.....	.....	49150	Adulterated.
1-0594	74.38	25.62	1.42	8.95	9.83	.....	2.01	4.84	49151	Adulterated, in being labelled Cream. Is a good quality milk.
1-3053	28.60	71.40	1.61	6.50	.....	56.35	.....	.....	49152	Fat too low. Adulterated.
1-2986	29.50	70.50	1.88	7.82	.....	54.20	.....	.....	49153	Meets standard.
1-0643	72.00	27.40	1.65	7.90	10.80	.....	2.23	3.33	49154	" non-sugared.

BULLETIN No. 257—

Date of Collection.	Nature of Sample.	No. of Samples.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of Opinion).
				Quantity.	Cent.	Manufacturer.	Furnisher.	

DISTRICT OF MANITOBA—

1912.								
April 16	Trumilk...	48646	Duncan & Hunter, St. James.	3 tins.	45	Canadian Milk Products, Ltd., Toronto,	Unknown	
" 17	" ...	48647	W. A. Bartram, Portage Ave., Winnipeg.	3 "	38	" " ..	"	
" 17	" ...	48648	J. Paterson, Portage Ave., Winnipeg.	3 "	38	" " ..	"	
" 18	" ...	48649	A. Hendry, Portage Ave., Winnipeg.	3 "	60	" " ..	"	
" 18	" ...	48650	R. F. Graham, Portage Ave., Winnipeg.	3 "	45	" " ..	"	

DISTRICT OF CALGARY—

May 7	Milk Powder.	44165	Jackson & Co., Lethbridge.	3 tins.	75	Canadian Milk Products, Ltd., Toronto.		
" 10	Milk Stock	44166	Donnelly Watson & Browne Co., Ltd., Calgary.	3 "	30	" " ..		Milk Stock...
" 10	Trumilk...	44167	" " ..	3 "	30	" " ..		Trumilk....
" 10	Milk Stock	44168	John Irwin Co., Ltd., Calgary.	3 "	40	" " ..		Milk Stock...
" 10	Trumilk...	44169	" " ..	3 "	40	" " ..		Trumilk....

DISTRICT OF NELSON—

April 18	Milk Powder.	49654	W. R. Megaw.	3 tins.	45	Canadian Milk Products, Ltd., Toronto.		
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MILK POWDERS.

Results of Analysis.						No. of Sample.	Remarks and Opinion of the Chief Analyst.
Moisture.	Total Solids.	Ash.	Fat.	Milk Sugar.	Proteids.		

A. C. LARIVIERE, INSPECTOR.

p.c.	p.c.	p.c.	p.c.	p.c.	p.c.		
1.93	98.07	5.65	27.53	36.97	27.92	48646	Whole milk. Genuine.
2.04	97.96	5.89	27.48	36.55	28.04	48647	" "
1.81	98.19	6.28	26.84	33.40	31.67	48648	" "
2.13	97.87	5.75	26.61	33.20	32.21	48649	" "
1.14	98.96	5.69	27.23	34.30	31.64	48650	" "

R. W. FLETCHER, INSPECTOR.

2.34	97.66	7.06	11.28	40.34	38.99	44165	Modified milk. Partially skimmed. Genuine.
4.64	96.36	7.21	0.91	45.55	41.69	44166	Separated milk. Genuine.
1.73	98.27	5.79	27.36	36.87	28.25	44167	Whole milk. Genuine.
4.87	96.13	7.28	0.92	44.67	42.24	44168	Separated milk. Genuine.
1.98	98.02	5.90	27.61	33.67	30.84	44169	Whole milk. Genuine.

THOS. PARKER, INSPECTOR.

2.96	97.02	5.37	28.10	33.75	29.79	49654	Whole milk. Genuine.
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BULLETIN No. 257—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.		Inspector's Report. (Is not an expression of Opinion).
				Quantity.	Cents.	Manufacturer.	Furnisher.	

DISTRICT OF VANCOUVER—

1912.								
May	1 Milk Powder.	38326	H. A. Edgett, Vancouver, B.C.	3 tins.	45	Canadian Milk Products, Ltd., Toronto.		Trumilk contains no sugar preservatives, chemicals or adulterations of any kind.
"	1 Milk Powder.	38327	London Grocery Co., Vancouver, B.C.	3 "	45	" " .		Milkstock contains no sugar preservatives, chemicals or adulterations of any kind.

DISTRICT OF VICTORIA—

April 24	Trumilk...	49155	The West End Grocery Co., Ltd., Victoria, B.C.	3 tins.	45	Canadian Milk Products, Ltd., Toronto.		
" 24	Milk Stock	49156	Harrison & McDonald, Victoria, B.C.	3 "	40	" " .		

MILK POWDERS.

• Results of Analysis.						No. of Sample.	Remarks and Opinion of the Chief Analyst.
Moisture.	Total Solids.	Ash.	Fat.	Milk Sugar.	Proteids.		

J. F. POWER, INSPECTOR.

p.c.	p.c.	p.c.	p.c.	p.c.	p.c.		
1.55	98.45	5.94	23.22	36.55	32.64		
						38326	Whole milk. Slightly below standard in fat.
5.27	94.45	7.37	0.96	45.05	41.35	38327	Separated milk. Genuine.

D. O'SULLIVAN, INSPECTOR.

3.96	96.04	5.64	25.66	34.32	31.64	49155	Whole milk. Genuine.
5.43	94.57	7.87	1.32	44.67	41.21	49156	Separated milk. Genuine.